



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0546; Project Identifier MCAI-2021-00387-P]

RIN 2120-AA64

Airworthiness Directives; Hoffmann GmbH & Co. KG Propellers

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2020-25-05, which applies to all Hoffmann GmbH & Co. KG (Hoffmann) model HO-V 72 propellers. AD 2020-25-05 requires amending the existing aircraft flight manual (AFM) with abnormal propeller vibration instructions. AD 2020-25-05 also requires visual inspection and non-destructive test (NDT) inspection of the propeller hub and, depending on the results of the inspections, replacement of the propeller hub with a part eligible for installation. AD 2020-25-05 also requires replacement of the propeller hub before exceeding 30 years since the date of manufacture. Since the FAA issued AD 2020-25-05, analyses of the inspection results showed that the 30-year life limit of the propeller hub is no longer needed. This proposed AD would retain certain requirements of AD 2020-25-05 and remove the 30-year life limit of the propeller hub. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Hoffmann GmbH & Co. KG, K pferlingstrasse 9, 83022, Rosenheim, Germany; phone: +49 0 8031 1878 0; email: info@hoffmann-prop.com; website: <https://hoffmann-prop.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0546; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7761; fax: (781) 238-7199; email: michael.schwetz@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0546; Project Identifier MCAI-2021-00387-P” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2020-25-05, Amendment 39-21347 (85 FR 78702, December 7, 2020), (AD 2020-25-05), for all Hoffmann model HO-V 72 propellers. AD 2020-25-05 was prompted by reports of cracks at different positions on two affected propeller hubs. AD 2020-25-05 requires amending the existing AFM with abnormal propeller vibration instructions. AD 2020-25-05 also requires visual inspection and NDT inspection of the propeller hub and, depending on the results of the inspections, replacement of the propeller hub with a part eligible for installation. AD 2020-25-05 also requires replacement of the propeller hub before exceeding 30 years since the date of manufacture or within 30 days after the effective date of AD 2020-25-05, whichever occurs later. The agency issued AD 2020-25-05 to prevent failure of the propeller hub.

Actions Since AD 2020-25-05 Was Issued

Since the FAA issued AD 2020-25-05, the European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2020-0226R1, dated March 31, 2021 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

Cracks have been reported at different positions on two affected parts, both installed on Slingsby T67 “Firefly” aeroplanes. One crack was found during scheduled inspection, the other crack during an unscheduled inspection after abnormal vibrations occurred. Both cases are under investigation by Hoffmann Propeller.

This condition, if not detected and corrected, could lead to in-flight propeller detachment, possibly resulting in damage to the airplane and/or injury to persons on the ground.

To address this potential unsafe condition, Hoffmann issued the SB, providing applicable instructions.

For the reasons described above, EASA issued Emergency AD 2020-0226-E to require inspections of affected parts and, depending on findings, replacement, and introduces a life limit for affected parts. That [EASA] AD also required, for certain aeroplanes, amendment of the applicable Aircraft Flight Manual (AFM).

Since that [EASA] AD was issued, recent analyses of inspection results showed that the life limit of 30 years is no longer necessary and Hoffmann Propeller issued Revision D of the SB accordingly. This [EASA] AD is revised to delete the life limit and to introduce a clarification for corrective action(s) during overhaul in paragraph (6) [of EASA AD].

You may obtain further information by examining the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0546.

In addition, Hoffmann issued Service Bulletin SB E53, Rev. D, dated February 18, 2021, to no longer specify that the propeller hub be replaced before exceeding 30 years since the date of manufacture.

FAA's Determination

This product has been approved by EASA and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Community, EASA has notified the FAA of the unsafe condition described in the MCAI and service information. The FAA is issuing this NPRM because the agency evaluated all the relevant information provided by EASA and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Hoffmann Propeller GmbH & Co. KG Service Bulletin SB E53, Rev. D, dated February 18, 2021. This service information specifies procedures for visual and NDT inspections of the propeller hub for cracks. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would retain certain requirements of AD 2020-25-05. This proposed AD would no longer require that the propeller hub be replaced before exceeding 30 years since the date of manufacture or within 30 days after the effective date of AD 2020-25-05.

Differences Between the Proposed AD and MCAI or Service Information

EASA AD 2020-0226R1, dated March 31, 2021, applies to Hoffmann HO-V 72 propellers with propeller hub HO-V 72 () () - () - () that have been used or are expected to be used for aerobatic maneuvers. This proposed AD applies to all Hoffmann model HO-V 72 propellers regardless of their use.

Hoffmann Propeller GmbH & Co. KG Service Bulletin SB E53, Rev. D, dated February 18, 2021, specifies that operators must send any propeller found with a crack to Hoffmann for investigation. The service bulletin also specifies that operators must report

any propeller with cracked hubs to Hoffmann. This proposed AD does not mandate sending the propeller or information to Hoffmann.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 35 propellers installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Amend AFM	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$2,975
Visually inspect propeller hub	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$2,975
NDT inspect propeller hub	8 work-hours x \$85 per hour = \$680	\$0	\$680	\$23,800

The FAA estimates the following costs to do any necessary replacement that would be required based on the results of the proposed inspection. The agency has no way of determining the number of aircraft that might need this replacement:

On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Replace propeller hub	5 work-hours x \$85 per hour = \$425	\$1,600	\$2,025

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive AD 2020-25-05, Amendment 39-21347 (85 FR 78702, December 7, 2020); and
- b. Adding the following new airworthiness directive:

Hoffmann GmbH & Co. KG: Docket No. FAA-2021-0546; Project Identifier MCAI-2021-00387-P.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-25-05, Amendment 39-21347 (85 FR 78702, December 7, 2020).

(c) Applicability

This AD applies to all Hoffmann GmbH & Co. KG HO-V 72 propellers.

(d) Subject

Joint Aircraft System Component (JASC) Code 6114, Propeller Hub Section.

(e) Unsafe Condition

This AD was prompted by reports of cracks at different positions on two affected propeller hubs. The FAA is issuing this AD to prevent failure of the propeller hub. The unsafe condition, if not addressed, could result in release of the propeller, damage to the airplane, and injury to persons on the ground.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Before the next flight after December 22, 2020 (the effective date of AD 2020-25-05), amend the existing aircraft flight manual by inserting the procedure:

“Abnormal propeller vibrations: As applicable, reduce engine RPM.”

(2) Before the next flight after the effective date of this AD, and thereafter, before the next flight after any flight where abnormal propeller vibrations have been experienced, visually inspect propeller hub HO-V 72 () () - () - () for cracks using paragraph 2.1 of Hoffmann Propeller GmbH & Co. KG Service Bulletin SB E53, Rev. D, dated February 18, 2021 (the SB).

(3) Within 20 flight hours after the effective date of this AD, perform a non-destructive test (NDT) inspection of propeller hub HO-V 72 () () - () - () using paragraph 2.3 of the SB.

(4) If, during any inspection required by paragraph (g)(2) or (3) of this AD, any crack is detected, replace propeller hub HO-V 72 () () - () - () with a part eligible for installation.

(5) During each overhaul of propeller hub HO-V 72 () () - () - () after the effective date of this AD, perform an NDT inspection using paragraph 2.3 of the SB.

(h) Definition

For the purpose of this AD, a “part eligible for installation” is a propeller hub HO-V 72 () () - () - () with zero hours time since new or a propeller hub HO-V 72 () () - () - () that has passed an NDT inspection using paragraph 2.3 of the SB.

(i) Non-Required Actions

(1) Sending the propeller to Hoffmann for investigation, as contained in paragraph 2.1 of the SB, is not required by this AD.

(2) Reporting propeller hubs with cracks to Hoffmann, as contained in paragraph 2.3 of the SB, is not required by this AD.

(j) Credit for Previous Actions

You may take credit for the initial visual inspection and NDT inspection of the propeller hub required by paragraphs (g)(2), (3), and (5) of this AD if you performed any of these actions before the effective date of this AD using Hoffmann Propeller GmbH & Co. KG SB E53 Rev. A, dated October 9, 2020; Rev. B, dated October 14, 2020; or Rev. C, dated December 9, 2020.

(k) Special Flight Permit

A special flight permit may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the airplane to a service facility to perform the NDT inspection. Special flight permits are prohibited to perform the visual inspection of the propeller hub.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In

accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) Related Information

(1) For more information about this AD, contact Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7761; fax: (781) 238-7199; email: michael.schwetz@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2020-0226R1, dated March 31, 2021, for more information. You may examine the EASA AD in the AD docket at <https://www.regulations.gov> by searching for and locating it in Docket No. FAA-2021-0546.

(3) For service information identified in this AD, contact Hoffmann GmbH & Co. KG, K pferlingstrasse 9, 83022, Rosenheim, Germany; phone: +49 0 8031 1878 0; email: info@hoffmann-prop.com; website: <https://hoffmann-prop.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

Issued on June 29, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.